



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,602	12/29/2004	Norifumi Matsubara	U 015564-3	9481
140	7590	06/04/2007	EXAMINER	
LADAS & PARRY			HOOK, JAMES F	
26 WEST 61ST STREET			ART UNIT	
NEW YORK, NY 10023			PAPER NUMBER	
			3754	
			MAIL DATE	
			DELIVERY MODE	
			06/04/2007	
			PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

11

<b>Office Action Summary</b>	Application No. 10/519,602	Applicant(s) MATSUBARA, NORIFUMI	
	Examiner James F. Hook	Art Unit 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 April 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usui (107) in view of Ogishi, Davey, and Oshima (852). The patent to Usui discloses the recited piping member comprising a metal tube 1 coated in a nickel layer 6, followed by a zinc-nickel alloy layer 3 having a thickness in an example of 3-8 microns, and a chromate layer 4, where such is a fuel tube, and that at least portions of the outer resin layer can be left off or removed at portions where connections are to be made, where such would mean the chromate layer was exposed, in support that the chromate layer can be left exposed and does not require resin see the teachings of Oshima which sets forth that the trivalent chromate layer can in fact be the outer most layer or optionally a plastic layer can be provided over it. The patent to Usui discloses all of the recited structure with the exception of stating the thickness of the chromate layer, using trivalent chromate of a specific thickness, providing cups to fuel pipes to make them fuel

Art Unit: 3754

rails, where the cups have exposed chromate, and providing an additional zinc layer on top of the zinc-nickel alloy layer. The patent to Oshima discloses that it is old and well known in the art to utilize trivalent chromate when using chromate to treat metal coating layers including zinc or zinc-nickel alloys, where such is a safer material to use over other chromates because such is safer for exposure to the human body, and adding a chromate layer of trivalent chromate as set forth above onto the zinc or zinc alloy layer, where such will provide more protection to the base metal than just the zinc coating, and where if desired an optional plastic layer can be provided over the chromate layer but is not needed to provide protection to the substrate, and where the thickness of the trivalent chromate layer can be in the range of 0.05 to 2 microns. It would have been obvious to modify the chromate layer of Usui to be made of trivalent chromate of a thickness which covers the range of 0.1-1.0 microns, as such is an equivalent type of chromate used to treat zinc coated metal substrates which is safer for exposure to humans and is of a specific thickness to provide the desired protection, as suggested by Oshima where such would provide the metal substrate layer of Usui with added protection against corrosion and premature failure thereby saving money while protecting humans exposed to the article so coated. The patent to Ogishi discloses that it is old and well known in the art to utilize trivalent chromate when using chromate to treat metal coating layers, and discloses that it is old and well known in the art to provide metal substrates with coating layers including zinc, and zinc-nickel alloys and that either one layer can be provided or multiple layers of these different coating layers thereby teaching the addition of a zinc layer in combination with a zinc nickel alloy layer,

and adding a chromate layer of trivalent chromate as set forth above. It would have been obvious to modify substrate of Usui by providing a zinc layer in combination with the zinc nickel alloy layer as such is an alternate embodiment as suggested by Ogishi where such would provide the metal substrate layer of Usui with added protection against corrosion and premature failure thereby saving money.

The patent to Davey discloses that it is old and well known in the art to provide metal fuel pipes with cups 58 to receive fuel injectors, as such is old and well known in the art. It would have been obvious to one skilled in the art to modify the tube in Usui as modified by providing cups to hold inserted fuel injectors as such is old and well known in the art as suggested by Davey and such would allow for the fuel pipe to connect to fuel injectors for delivery of fuel in a more efficient manner, where such would save money. It is considered that one skilled in the art would modify the pipe in Usui to include cups and then the coating processes, based on the teachings of Davey which set forth creating the pipe of a circular cross section and providing the cups, would be performed so that the entire pipe were properly coated and protected, and as set forth above Usui teaches that connection portions, of which cups would be connection portions as well, can be left without an outer resin layer, thereby leaving the trivalent chromate layer exposed to inherently contact the injector.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usui (107) in view of Iorio (940), Davey, and Oshima (852). The patent to Usui discloses the recited piping member comprising a metal tube 1 coated in a nickel layer 6, followed by a zinc-nickel alloy layer 3 having a thickness in an example of 3-8

Art Unit: 3754

microns, and a chromate layer 4, where such is a fuel tube, and that at least portions of the outer resin layer can be left off or removed at portions where connections are to be made, where such would mean the chromate layer was exposed, in support that the chromate layer can be left exposed and does not require resin see the teachings of Oshima which sets forth that the trivalent chromate layer can in fact be the outer most layer or optionally a plastic layer can be provided over it. The patent to Usui discloses all of the recited structure with the exception of stating the thickness of the chromate layer, using trivalent chromate of a specific thickness, providing cups to fuel pipes to make them fuel rails, where the cups have exposed chromate, and providing an additional zinc layer on top of the zinc-nickel alloy layer. The patent to Oshima discloses that it is old and well known in the art to utilize trivalent chromate when using chromate to treat metal coating layers including zinc or zinc-nickel alloys, where such is a safer material to use over other chromates because such is safer for exposure to the human body, and adding a chromate layer of trivalent chromate as set forth above onto the zinc or zinc alloy layer, where such will provide more protection to the base metal than just the zinc coating, and where if desired an optional plastic layer can be provided over the chromate layer but is not needed to provide protection to the substrate, and where the thickness of the trivalent chromate layer can be in the range of 0.05 to 2 microns. It would have been obvious to modify the chromate layer of Usui to be made of trivalent chromate of a thickness which covers the range of 0.1-1.0 microns, as such is an equivalent type of chromate used to treat zinc coated metal substrates which is safer for exposure to humans and is of a specific thickness to provide the desired

Art Unit: 3754

protection, as suggested by Oshima where such would provide the metal substrate layer of Usui with added protection against corrosion and premature failure thereby saving money while protecting humans exposed to the article so coated. The patent to Iorio discloses that it is old and well known in the art to form a metal substrate pipe with a coating layer of zinc-nickel alloy and that such can then be provided with a further pretreatment that is provided over the zinc alloy layer which can include zinc and chromate layers to allow for connection to further plastic layers provided. It would have been obvious to modify substrate of Usui by providing a zinc layer over and in combination with the zinc nickel alloy layer as such is an alternate embodiment as suggested by Iorio as a further treatment layer which can be added between an inner zinc alloy layer and a chromate layer prior to the application of a plastic layer, where such would provide the metal substrate layer of Usui with added protection against corrosion and premature failure thereby saving money. The patent to Davey discloses that it is old and well known in the art to provide metal fuel pipes with cups 58 to receive fuel injectors, as such is old and well known in the art. It would have been obvious to one skilled in the art to modify the tube in Usui as modified by providing cups to hold inserted fuel injectors as such is old and well known in the art as suggested by Davey and such would allow for the fuel pipe to connect to fuel injectors for delivery of fuel in a more efficient manner, where such would save money. It is considered that one skilled in the art would modify the pipe in Usui to include cups and then the coating processes, based on the teachings of Davey which set forth creating the pipe of a circular cross section and providing the cups, would be performed so that the entire pipe were

Art Unit: 3754

properly coated and protected, and as set forth above Usui teaches that connection portions, of which cups would be connection portions as well, can be left without an outer resin layer, thereby leaving the trivalent chromate layer exposed to inherently contact the injector.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 and 2 have been considered but are moot in view of the new ground(s) of rejection with regards to thicknesses. Applicant's arguments filed April 25, 2007 have been fully considered but they are not persuasive. With regards to the top layer being the chromate layer in applicants claim, such language is not persuasive when the claim language requires it be the top layer of a stack of layers, not that such is the outermost layer which appears to be what applicant is arguing but such an argument is more detailed than the claim language which requires only the trivalent chromate be the top layer of a plurality of layers which is taught by Usui as combined with the other references. Further it is noted that the new reference to Oshima 852 mentioned above teaches that the plastic layers can be left off and such are optional. With respect to Ogishi, in column 4, lines 30-37, the use of zinc and zinc-nickel layers on the plate are disclosed, and it also states that different metals or alloys may be plated in multiple layers teaching the use of more than one layer of different metals and alloys thereby teaching that it is known to use more than one layer of plating of different materials of which the materials chosen can be zinc and zinc-nickel. Any examples given may be examples of preferred embodiments, but the

Art Unit: 3754

statement made in Ogishi is all that is needed for the proper teaching of multiple different coatings. Any arguments directed toward unexpected results will need to be better set forth with supportive documents in order to be considered to overcome the obviousness rejection above.

### ***Conclusion***

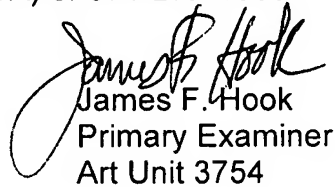
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Iorio (223), Oshima (122) and Hudson disclosing state of the art fuel rails and coated metal substrates.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
James F. Hook  
Primary Examiner  
Art Unit 3754

JFH